

# IRON SHIPS.

No. 112 Survey held at Newcastle Date 17th November 1869 to 18th August 1870 Rev 22/8/70 29 miles 1.4

in the Iron-hulled Steamer "Neptune" Master J. Jamat  
 Tonnage under tonnage deck 191.72 Built at Newcastle When built 1870 Launched 4th May

By whom built W. B. Horsley Owners W. & A. Bell  
 Part belonging to Shields Destined Voyage Hull  
 If Surveyed while Building, Afloat, or in Dry Dock while building

Dimensions of Ship per Register, length 124 breadth 20 depth 11.9  
 Draught aloft 120 Extreme Breadth 20 Depth from top of Upper Deck Beam to top of Floor 11 Power of Engines 50 No. of Decks one

	Inches in Ship.	Inches required per Rule.	Inches in Ship.	Inches required per Rule.	16ths required per Rule.	16ths required per Rule.
Keel, $\frac{1}{2}$ bar iron, depth and thickness	6 x 1 1/2	6 x 1 1/2				
if plate iron, breadth and thickness						
Keelson, $\frac{1}{2}$ bar iron, moulding and thickness	6 x 1 1/2	6 x 1 1/2				
if plate iron, breadth and thickness						
Keelson-post, $\frac{1}{2}$ bar iron, moulding and thickness	6 x 3	6 x 3				
if plate iron, breadth and thickness						
Distance of Frames from moulding edge to moulding edge, all fore and aft	21	21				
Frames, Size of Angle Iron, single or double	2 1/2	2 1/2	6	2 1/2	2 1/2	6
Reversed Iron, $\frac{1}{2}$ to every frame	2 1/2	2 1/2	5	2 1/4	2 1/4	5
Floors, depth and thickness of Floor Plate at mid line	13	5	13	5		
Ditto ditto at Bilge Keelson						
Size of Reversed Angle Iron, and No. <u>one</u> at top of Floor Plate	2 1/2	2 1/2	5	2 1/4	2 1/4	5
Beams, Deck (No. <u>34</u> ) double Angle Iron, Plate, Tee, or Bulb Iron	5 1/2	5	5	5		
double or single Angle Iron, on top edge	2 1/2	2 1/2	5	2 1/4	2 1/4	5
average space between	on alternate frames					
Hold, or Lower Deck (No. ) double Angle, Tee, Plate, or Bulb Iron	none					
double or single Angle Iron on edge	none					
average space between						
Paddle, sided and moulded, thickness of Plate size of Angle Iron						
Engine						
Keelson, single or double plate, box, or intercostal	16	5	16	5		
Size of Plates <u>Bulb Iron</u>	5 1/2	5	5 1/2	5		
Size of Angle Irons	3	3	6	3	3	6
Side, single or double, plate, box, or intercostal	none					
Bilge (No. <u>one</u> ) at each Bilge, single, or double, plate, or box	3	3	6	3	3	6

Plates in Garboard Strakes, breadth and thickness 33 7 24 7  
 Ditto from Garboard to upper part of Bilges 6 6 6  
 from upper part of Bilge to a perpendicular height from upper side of Keel of  $\frac{3}{4}$ ths the entire depth of Hold 5 5 5  
 from  $\frac{3}{4}$ ths depth of Hold to lower edge of Sheerstrake 5 5 5  
 Sheerstrake, breadth and thickness 34 6 24 6  
 Butt Straps to outside plating, breadth and thickness 4 1/2 5 7 5 7  
 Gunwale Plate or Stringer on ends of Upper Deck Beams, breadth and thickness 18 5 18 5  
 Angle Iron on ditto 3 x 3 x 6 3 x 3 x 6  
 Stringer or Tie Plates fore and aft, on Upper Deck Beams, outside Hatchways 7 1/2 5 7 1/2 5  
 Diagonal Tie Plates on ditto 7 1/2 5 7 1/2 5  
 Planksheer, materials and scantlings Cutter  
 Waterway ditto ditto Cutter  
 Flat of Upper Deck, thickness and material 3 1/4 2 1/2  
 how fastened to Beams by nut & screw bolts  
 Ceiling between Decks and in Hold, thickness and material 2 1/2 Red Pine & doubled with oak wood in way of hatchways  
 Clamps or Spirketting ditto ditto  
 Stringer Plates on ends of Hold or Lower Deck Beams, breadth and thickness 3 x 3 x 6 3 x 3 x 6  
 Stringer or Tie Plates fore and aft outside Hatchways, on Hold or Lower Deck Beams 3 x 3 x 6 3 x 3 x 6  
 Stringers in Hold 3 x 3 x 6 3 x 3 x 6  
 Flat of Lower Deck, thickness and material 3 1/4 3  
 Main piece of Rudder, diameter at head 3 1/8 3  
 at heel 3 1/8 2  
 (Can the Rudder be unshipped afloat yes)  
 Bulkheads, No. 4 Thickness of 4/16  
 Height up upper deck  
 how secured to the sides of the ship by double frames  
 size of vertical angle irons 2 1/2 x 2 1/2 x 5 and their distance apart 30"

The Frames extend in one length from keel to gunwale rivetted through plates with 5/16 in. rivets, about 2/4 apart.  
 The reverse angle irons on the floors extend in one length across the middle line from bilge to bilge and 2  
 on the frames from to gunwale alternately

Keelson, how are the various lengths of plates or angle irons connected? by double rivetted butt stops  
 Plates, Garboard, double or rivetted to keel, double or at upper edge, with rivets 7/16 ins. diameter, averaging 3/4 in. apart.  
 Edges from Garboards to upper part of bilge, worked clencher, double or single rivetted; with rivets 5/16 in. diameter, averaging 2/4 ins. apart.  
 Butts from Keel to turn of bilge, worked carvel with butt straps (6 x 4) thick, double or single rivetted; with rivets 5/16 in. diameter, averaging 2/4 ins. apart. Do the butt straps lap over and rivet through the lands of the strake below? no

Edges from bilge to sheerstrake, worked carvel with a lining piece ( ) thick, or clencher, double or single rivetted; with rivets 5/16 in. diameter, averaging 2/4 in. apart. Do the butt straps lap over and rivet through the lands of the strake below? no  
 Edges of Sheerstrake, double or single rivetted? At upper edge single At lower edge double

Butts from bilge to planksheers, worked carvel with butt straps (5 x 6) thick, double or single rivetted; with rivets 5/16 in. diameter, averaging 2/4 ins. apart. Breadth of laps in double rivetting (3 1/2) Breadth of laps in single rivetting (2 1/8)

Butt Straps of Keelsons, Stringer and Tie Plates, double or single rivetted? double rivetted  
 Planksheer, how secured to the plating of the sides Explain by sketch  
 Waterway " " planksheer and to the Beams Cutter  
 Deck Beams, how secured to the side? by welded knees rivetted to frames

Hold or Lower Deck ditto none  
 Paddle " " none No. of breasthooks 3 crutches 3

What description of Iron is used for the Frames, Beams, Keelsons, Tie and Stringer Plates, Outside Plating, &c. Palmer & Co's  
 Manufacturer's name or trade mark Palmer & Co's

We certify that the above is a correct description of the several particulars therein given.  
 Builder's Signature W. B. Horsley Surveyor's Signature A. J. ...

**Workmanship.** Are the lands or laps of the clenchwork in all cases in breadth at least five and a half times the diameter of the rivets in double rivetted edges and butts, and at least three and a quarter times the diameter of the rivets where single rivetting is admitted? yes

Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? yes

Do the fillings between the ribs and plates fill in solid with single pieces? or are they in short lengths of various thicknesses? solid single piece

Do the holes for rivetting plate to frames, butt straps, or plate to plate, &c., conform well to each other? fairly and are the rivet holes well and sufficiently countersunk in the outer plate? yes

Are there any rivets which either break into or have been put through the seams or butts of the plating? a few

Her Masts, Bowsprit, Yards, &c., are in good condition, and sufficient in size and length. (If they are of Iron or Steel give the Scantlings of Plating, Angle Irons, &c., and further explain by a Sketch showing how the lower Masts and Bowsprit are constructed, showing the number of Plates and Angle Irons, mode of rivetting, quality of Materials, and if stamped with Maker's name.)

81982m

Tested at Lloyd's Type P. A. signed R. Punell Esq.

N <sup>o</sup> .	She has SAILS.	CABLES, &c.	Fathoms.	Inches.	Test as per Certificate.	In. req'd per Rule.	Test req'd per Rule.	ANCHORS, &c.	N <sup>o</sup> .	Weight. Ex. Stock.	Test as per Certificate.	W'ght req'd per Rule.	Test req'd per Rule.
	Fore Sails,	Chain .....	180	7/8	13.15.0.0	14	13 3/4	Bowers .....	2	5.1.9	7.11.0.7	5.1.0	7.96
	Fore Top Sails,	<u>Long</u>											
	Fore Topmast Stay Sails	Hempen Stream Cable	45	10/16		9/16							
	Main Sails,	Hawser .....	40	6		6		Stream .....	1	2.1.8		2.0.0	
	Main Top Sails,	Towlines .....	40	4		4							
		Warp .....	120	3				Kedges .....	1	1.1.0		1.0.0	
		All of <u>good</u> quality.											

Her Standing and Running Rigging heup sufficient in size and good in quality.

She has one life Long Boat and one other

The present state of the Windlass is good Capstan good and Rudder good Pumps good & sufficient

Order for Special Survey	DATES of	1st.	2nd.	3rd.	4th.	5th.
No. <u>727</u>	Surveys held	On the several parts of the frame, when in place, and before the plating was wrought	On the plating during the progress of rivetting	When the beams were in and fastened, and before the decks were laid	When the ship was complete, and before the plating was finally coated	After the ship was launched
Date <u>15 Nov 1869</u>	while building	} <u>built under special survey</u>				
No. <u>—</u>	as per					
Date <u>—</u>	Section 18.					

State if she has a Spar Deck no Poop no or Forecabin no

**General Remarks,** This vessel is built in accordance with the Section attached, and the Secretary's letter of 1<sup>st</sup> December 1869 - that is in accordance with the Rules for the B grade.

In what manner are the surfaces preserved from oxidation? Inside by Portland Cement & paint.

Ditto ditto Outside by paint & composition.

I am of opinion this Vessel should be Classed B I

The amount of the Fee ..... £ 2 : : : is received by me,

Special ..... £ 9 : 10 : :  
Certificate (if required) ..... £ : : : :

Committee's Minute 23<sup>rd</sup> August 70.

Character assigned B I

Committee's Minute 21<sup>st</sup> October 1870  
Character assigned B I

4. The W. B. Standard, Smith's Builders, Wellington, New Zealand on 4<sup>th</sup> Dec.

This Paper appears to be a copy of the original record of the Survey. Registered by the Registrar of the Admiralty.